

New Species of *Cyrtandra* (Gesneriaceae) from Kauai Hawaiian Plant Studies 74¹

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UP TO THE PRESENT there are 22 known species or varieties of *Cyrtandra* on the island of Kauai. Since Kauai has large areas of rain forest, more novelties in this genus are to be expected. The present paper adds two more species to the known total for the island.

GESNERIACEAE

Cyrtandra clypeata sp. nov. (sect. *Crotonocalyces*)

Figure 1

DIAGNOSIS HOLOTYPE: Plantae succulentae ad 6 dm altas crescentes, petiolis 7–11.5 cm longis dense albi-pilosulis, *laminis* 16–21.5 cm longis 8.4–10.5 cm latis subtiliter chartaceis in puncto 1–1.6 cm ex basi peltatis inconcinne oblanceolatis vel obovatis vel ellipticis ad basem rotundatam deminuentibus apice subito breve acuminato marginibus acriter serrati-dentatis supra paginis clare viridibus et remote pilosulis infra pallide viridibus intervallis remote pilosulis sed midnervo et nervis secundariis salebrose pilosis 8 nervis secundariis in dimidio quoque ascendentibus fere rectis, *cymis* (subsessilibus?) 6–8-floriferis umbellatis dense divergente pilosis, pedunculo 1–3 mm longo, bracteis 13–17 mm longis lanceolatis foliaceis congestis, pedicelis 15–20 mm longis, alabastris non visis, *calycibus* in flore 9–13 mm longis late ellipsoideis intra et extra dense divergente viscidate catenulate pilosis tubo 8–10 mm longo chartaceo pallidore subviridi ellipsoidei-subgloboso 2-

labiatis inter labiis 6 mm partitis, labia supera 3-lobata et inter lobas 2 mm partitis eis in basi 1.5 mm latis anguste deltoideis, labia infera bilobata lobis 5–6 mm longis 3.5 mm latis oblique deltoidei-lanceolatis, *corollis* (quando bullitis) 23 mm longis albis exsertis intra glabris extra basi glabra sed parte exserta in nervis longitudinalibus sparse pilosulis tubo 17 mm longo in basi et in medio 5 mm diametro in fauce 6 mm diametro tubulato sed in medio in 20° deorsum subcurvato parte $\frac{1}{3}$ supera gibbosa, limbo 2-labiato 5-lobato, 2 lobis superis 5 mm longis 5.5 mm latis late oblongi-ellipticis intra glabris, labia infera 3-lobata, 2 lobis lateralibus 6 mm longis et latis suborbicularibus, loba infera 7.7 mm longa 6 mm lata late oblongi-elliptica, 2 antheris inferis cum filamentis in tubo corollae 5 mm ex fauce adnatis parte libera 2 mm longa ligulatisubulata in spira sursum curvatis, antheris 3.3 mm longis inconcinnis deltoidei-ovatis, 3 staminodiis nullis, *stylo* 5 mm longo glabro, 2 lobis stigmatis 3 mm longis ellipticis in latere proximali $\frac{1}{2}$ connatis, *ovario* 6 mm longo lanceoloideo glabro cum disco cupulato 1.5 mm alto cincto, *baccis* globosis in sicco 7 mm diametro.

DIAGNOSIS OF HOLOTYPE: Plants succulent, not over 6 dm in height; petioles 7–11.5 cm long, densely white pilosulous; *blades* 16–21.5 cm long, 8.4–10.5 cm wide, thin chartaceous, peltate at 1–1.6 cm from the base, asymmetrically oblanceolate or obovate or elliptic, narrowed to the rounded base, the apex abruptly short acuminate, the margins sharply serrate dentate, the surface above bright green and spaced pilosulous throughout, below pale green and spaced pilosulous on the intervals, but the midrib and secondary veins shaggy pilose, with 8 secondary veins on each side, these ascending, nearly straight; *cymes* (subsessile?), 6–8-

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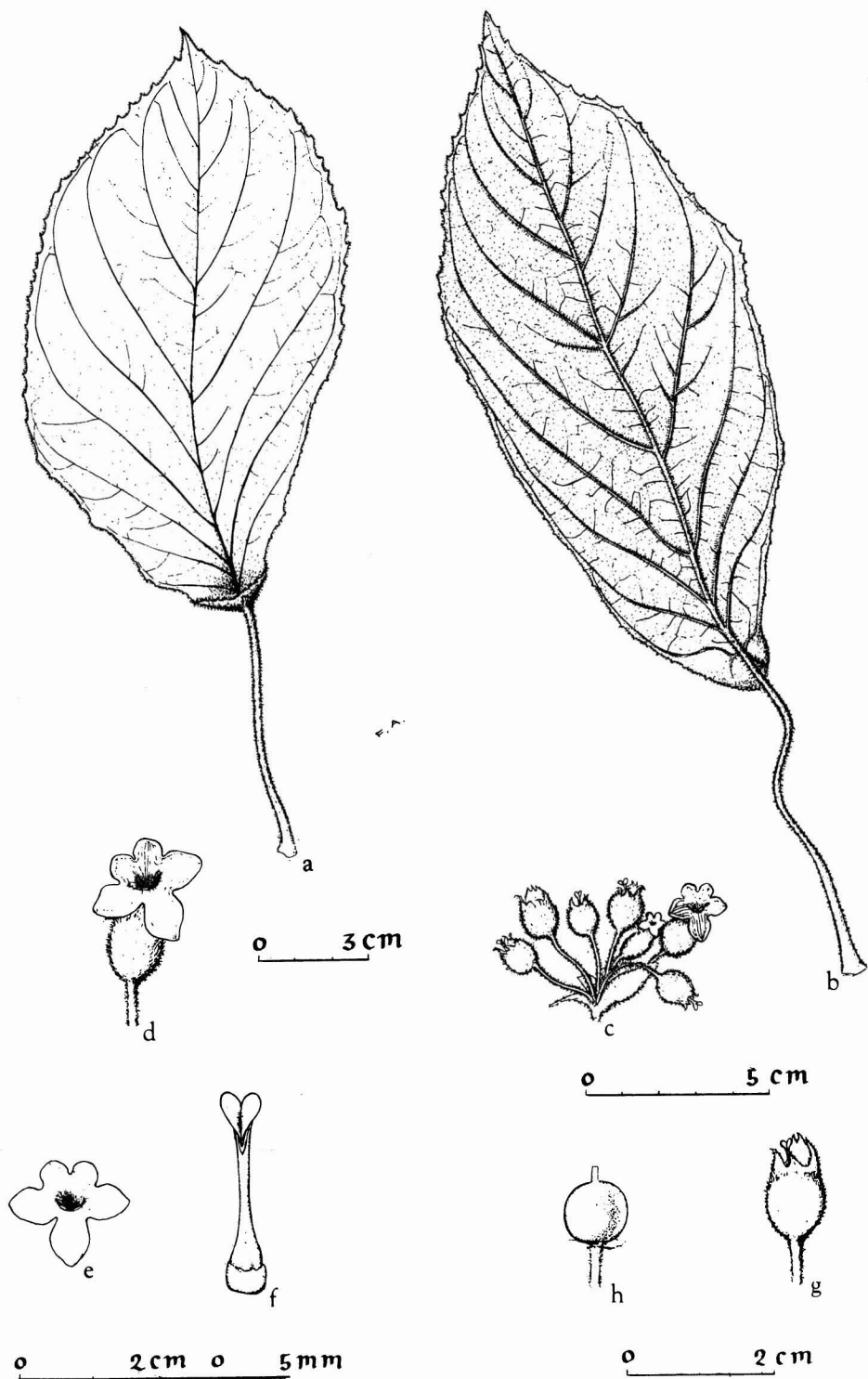


FIGURE 1. *Cyrtandra chypeata* St. John, from holotype. *a, b*, leaves, $\times \frac{1}{2}$; *c*, inflorescence, $\times \frac{1}{2}$; *d*, flower, $\times 1$; *e*, corolla, face view, $\times 1$; *f*, pistil, $\times 2$; *g*, fruit, $\times 2$; *h*, berry, $\times 2$.

flowered, umbellate, densely spreading pilose; peduncle 1–3 mm long; bracts 13–17 mm long, lanceolate, foliaceous, crowded and forming a rosette; pedicels 15–20 mm long; buds not seen; *calyx* in flower 9–13 mm long, broadly ellipsoid, densely spreading viscid catenulate pilose without and within, the tube 8–10 mm long, chartaceous, very pale greenish, ellipsoid-subglobose, 2-lipped, cleft 6 mm between the lips, the upper lip 3-lobed, cleft 2 mm between the lobes, these 1.5 mm wide at base, narrowly deltoid; lower lip 2-lobed, the lobes 5–6 mm long, 3.5 mm wide, obliquely deltoid-lanceolate; *corolla* (when boiled) 23 mm long, white, well exerted, within glabrous, without the included base glabrous, the exerted upper part sparsely white catenulate pilosulous on the longitudinal veins, the tube 17 mm long, at base and middle 5 mm in diameter, at the throat 6 mm in diameter, tubulate, but at the middle gently down-curved at 20° from the axis of the lower throat, the upper $\frac{1}{3}$ gibbous; limb 2-lipped, 5-lobed; 2 upper lobes 5 mm long, 5.5 mm wide, broadly oblong-elliptic, glabrous within; lower lip 3-lobed, the 2 lateral lobes 6 mm long and wide, suborbicular, the lower lobe 7.7 mm long, 6 mm wide, broadly oblong-elliptic; the 2 lower stamens with their filaments adnate to the corolla tube to within 5 mm of the throat, the free portion 2 mm long, ligulate-subulate, spirally up-curved; anthers 3.3 mm long, asymmetric deltoid ovate; the 3 staminodia wanting; *style* 5 mm long, glabrous; 2 stigmatic lobes 3 mm long, elliptic, connate halfway up the proximal side; *ovary* 6 mm long, lanceoloid, glabrous, the base surrounded by a cupulate disk 1.5 mm high; *berry* globose, when dried 7 mm in diameter.

HOLOTYPE: Hawaiian Islands, Kauai Island, Na Pali coast, back of Awaawapuhi Canyon, 26 May 1971, *Robt. Hobdy* 230 (BISH).

DISCUSSION: *Cyrtandra clypeata* is a member of the section *Crotonocalyces*, as is its closest relative, *C. Wawrai* C. B. Clarke, of Kauai, a species with the petioles densely

hirsute; blades 15–32 cm long, 12–21 cm wide, broadly asymmetrically ovate to suborbicular, peltate at 2.5–5 cm from the base; cymes with peduncles 12–25 mm long; pedicels 30–40 mm long; calyx in flower 16–21 mm long, in fruit 23–25 mm long and the upper lobes 4.5 mm wide; corolla 27 mm long. *C. clypeata* has the petioles densely pilosulous; blades 16–21.5 cm long, 8.4–10.5 cm wide, asymmetrically oblanceolate or obovate or elliptic, peltate at 1–1.6 cm from the base; cymes apparently subsessile; pedicels 15–20 mm long; calyx in flower 9–13 mm long, the upper lobes 1.5 mm wide; corolla 23 mm long.

The new epithet is the Latin adjective *clypeata*, shield-shaped, and it is given with reference to the shape of the leaves.

Cyrtandra hauptensis sp. nov. (sect. *Crotonocalyces*)

Figure 2

DIAGNOSIS HOLOTYPE: Licet frutex est, ramulis foliosis 4–6 mm diametro quadrangularibus dense capitate glandulose divergente albi-pilosulis, internodis 1–2 cm longis, novellis cum pilis simulantibus, foliis oppositis divergentibus licet non congestis, petiolis 12 cm longis cum pilis simulantibus sed paucis, laminis 15 cm longis 14.2 cm latis suborbicularibus in puncto 2 cm ex margine peltatis apice subito acuto crasse chartaceis marginibus plerumque serratis sed proxima apicem dentatis supra obscure viridibus et sparsim glandulose catenulati-pilosulis infra sublutei-viridibus et cum pilis simulantibus nervis secundariis 7 in dimidio quoque curvatis adscendentibus et arcuatis interconnectentibus, cymis 3.5–4 cm longis axillaribus 7–9-floriferis adscendentibus dense divergente capitate glandulose albi-pilosulis, pedunculis 9–13 mm longis, pedicelis 4–15 mm longis, bracteis 9–15 mm longis suborbicularibus foliaceis sublutei-viridibus, alabastris campanulatis cum lobis adscendentibus, calycibus 16 mm longis (quando bullitis) 14–15 mm longis in sicco foliaceis sublutei-viridibus extra divergente capitate glandulose albi-pilosulis intra glabris 2-

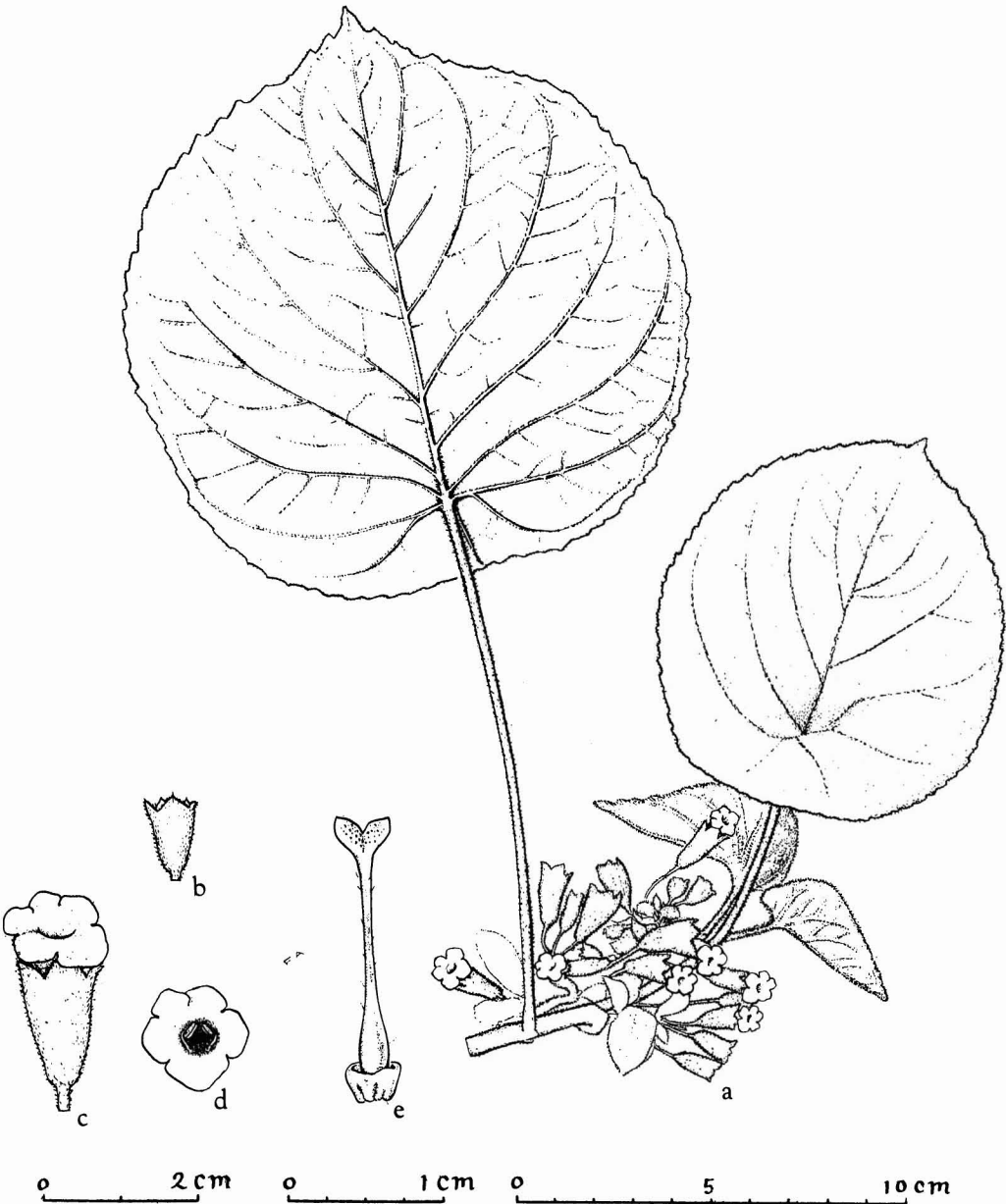


FIGURE 2. *Cyrtandra haupuensis* St. John, from holotype. *a*, habit, $\times \frac{1}{2}$; *b*, bud, $\times 1$; *c*, flower, $\times 1$; *d*, corolla, face view, $\times 1$; *e*, pistil, $\times 2$.

labiatis et inter labias 3 mm partitis, labia supera 3-lobata inter lobas adscendentes 2 mm partita eis in basi 3 mm latis deltoideis, labia infera bilobata lobis 2 mm longis 3 mm latis deltoideis, corolla 26 mm longa (quando bullita) 23 mm longa in sicco alba moderate

exserta extra sparsim in dimidio supera sparsim pilosula tubo 13 mm longo et in basi 4 mm diametro in medio 3 mm diametro in fauce 5 mm diametro in tertia supera minime recurvata, limbo 2-labiato 5-lobato, 2 lobis superis 3 mm longis 5.5 mm latis

oblate rhotundate rhombicis in basi imbricatis in fauce glandulose atomiferis, labia infera 3-lobata 2 lobis lateralibus 3 mm longis 6 mm latis convexis, loba infera 4 mm longa 8 mm lata oblate rotundate rhombica, lobis eis in fauce glandulose atomiferis, 2 staminibus inferis cum filamentis in 5 mm ex fauce adnatis parte libera 0.5 mm longa recta, 2 antheris perfectis 4 mm longis 2.3 mm latis oblique ovatis cum connectivo 1.5 mm lato, 2 staminodiis lateralibus in puncto 7 mm ex fauce adnatis parte libera 0.3 mm longa lanceolata, *stylo* 10 mm longo remote capitate glandulose pilosulo, 2 lobis stigmaticis 3 mm longis ellipsoideis in latere proximali $\frac{1}{2}$ connatis, ovario 3 mm longo lanceoloideo glabro basi a disco 2 mm alto cupulato cincto, fructibus incognitis.

DIAGNOSIS OF HOLOTYPE: Doubtless a shrub; leafy branchlets 4–6 mm in diameter, quadrangular, densely white spreading capitate glandular pilosulous; internodes 1–2 cm long; young shoots densely white, spreading capitate glandular pilosulous; *leaves* opposite, divergent, apparently not crowded; petioles 12 cm long, the similar pubescence becoming somewhat sparse; *blades* 15 cm long, 14.2 cm wide, suborbicular, peltate at 2 cm from the base, the apex abruptly acute, thick chartaceous, the margins mostly serrate but dentate near the apex, above dark green, and spaced catenulate-glandular pilosulous throughout, below yellowish green, with similar pilosity; secondary veins 7 in each half, curved ascending and in-arched; *cymes* 3.5–4 cm long, axillary, 7–9-flowered, ascending, densely spreading white capitate glandular pilosulous; peduncles 9–13 mm long; pedicels 4–15 mm long; bracts 9–15 mm long, suborbicular, foliaceous, yellowish green; buds narrowly campanulate, with ascending lobes; *calyx* 16 mm long (when boiled), 14–15 mm long when dried, foliaceous, yellowish green, without spreading white capitate glandular pilosulous, within glabrous, 2-lipped, cleft 3 mm between the lips; upper lip 3-lobed, cleft 2 mm between the ascending lobes, these 3 mm wide at base, deltoid; lower lip 2-lobed, the lobes 2 mm long, 3 mm wide, deltoid;

corolla 26 mm long (when boiled), 23 mm long when dried, white, well exerted, without sparsely similarly pilose on the outer half, the tube 13 mm long, and 4 mm in diameter at base, 3 mm at the middle, 5 mm at the throat, slightly recurved at the upper third; limb 2-lipped, 5-lobed; 2 upper lobes 3 mm long, 5.5 mm wide, oblate rounded rhombic, overlapping at base, glandular atomiferous in the throat; lower lip 3-lobed, the 2 lateral lobes 3 mm long, 6 mm wide, convex; lower lobe 4 mm long, 8 mm wide, oblate rounded rhombic, these lobes in the throat glandular atomiferous; 2 lower stamens with their filaments adnate to the corolla tube to within 5 mm of the throat, the free portion 0.5 mm long, straight; the 2 perfect anthers 4 mm long, 2.3 mm wide, obliquely ovate, the connective 1.5 mm wide; the 2 lateral staminodia adnate to the tube to within 7 mm of the throat, the free portion 0.3 mm long, lanceolate; *style* 10 mm long, remotely capitate glandular pilosulous; 2 stigmatic lobes 3 mm long, ellipsoid, connate halfway up the proximal side; *ovary* 3 mm long, lanceoloid, glabrous, the base surrounded by a cupulate disk 2 mm high; fruit unknown.

HOLOTYPE: Hawaiian Islands, Kauai Island, Haupu Range, right-hand side of Kipu Kai Gap, 3 November 1916, C. N. Forbes 746.K (BISH).

DISCUSSION: *Cyrtandra haupuensis* is a member of the section *Crotonocalyces*, as is its closest relative, *C. Wawrai* C. B. Clarke, of Kauai, a species with the peduncles 12–25 mm long, 3–14-flowered; pedicels 30–40 mm long; bracts 18–30 mm long; calyx 20–32 mm long, within white capitate glandular pilosulous, the lobes 5–10 mm long, ovate lanceolate, sharply acute; blades peltate at 3–5 cm from the base. *C. haupuensis* has the peduncles 9–13 mm long, 7–9-flowered; pedicels 4–15 mm long; bracts 9–15 mm long; calyx 14–16 mm long, within glabrous, the lobes 2–3 mm long, deltoid; blades peltate at 2 cm from the base.

The new epithet is formed from the name of the type locality, Haupu Range, and *-ensis*, the Latin adjectival place suffix.